REMARKS/ARGUMENTS

Claims 1-54 are currently pending in the present application. Claims 1-3, 5, 7-11, 13, 15-19, 21 and 23-26 have been currently amended. New Claims 27-54 have been added. Claims were amended to remove multiple dependencies and to conform the claim language to U.S. practice. Support for the amended and new claims can be found throughout the specification, and in the original claims. Particular support for the amended claims can be found in the respective original claims. Particular support for new Claims 27-30 can be found in original Claim 7. Particular support for new Claims 31-34 can be found in original Claim 15. Particular support for new Claims 35-38 can be found in original Claim 23. Particular support for new Claims 39 and 40 can be found in original Claim 25. Particular support for new Claims 41 and 42 can be found in original Claim 26. Particular support for new Claims 43-46 can be found in original Claim 8. Particular support for new Claims 47-50 can be found in original Claim 16. Particular support for new Claims 51-54 can be found in original Claim 24. No new matter is believed to have been introduced by the amended or new claims.

Response to the Restriction Requirement of June 16, 2004

The Office has required restriction of the claims into the following groups.

Group I: Claim 1, drawn to an erythrose reductase of SEQ ID NO:2.

Group II: Claims 2-8, drawn to a DNA encoding the reductase of Invention I, cell comprising said DNA and method of producing said protein.

Group III: Claim 9, drawn to an erythrose reductase of SEQ ID NO:4.

Group IV: Claims 10-16, drawn to a DNA encoding the reductase of Invention III, cell comprising said DNA and a method of producing said protein.

Group V: Claim 17, drawn to an erythrose reductase of SEQ ID NO:6.

Group VI: Claims 18-24, drawn to a DNA encoding the reductase of Invention V, cell comprising said DNA and a method of producing said protein.

Group VII: Claim 25 (partially), drawn to a method of producing erythritol using the protein of Invention I.

Group VIII: Claim 25 (partially), drawn to a method of producing erythritol using the protein of Invention III.

Group IX: Claim 25 (partially), drawn to a method of producing erythritol using the protein of Invention V.

Group X: Claim 26 (partially), drawn to a method of producing erythritol using the DNA of Invention II.

Group XI: Claim 26 (partially), drawn to a method of producing erythritol using the DNA of Invention IV.

Group XII: Claim 26 (partially), drawn to a method of producing erythritol using the DNA of Invention VI.

Although Applicants traverse the Examiner's restriction requirement, based upon the groups delineated by the Examiner, Applicants believe the newly added claims fall into the groups as follows: new Claims 27-30 belong to Group II; new Claims 31-34 belong to Group IV; new Claims 35-38 belong to Group VI; new Claim 39 belongs to Group VIII; new Claim 40 belongs to Group IX; new Claim 41 belongs to Group XI; new Claim 42 belongs to Group XII; new claims 43-46 belong to Group II.; new claims 47-50 belong to Group IV and new claims 51-54 belong to Group VI.

Applicants elect with traverse Group IV (claims 10-16) for further prosecution.

The Examiner noted reasons for the above restriction on pages 3 and 4 of the present Office Action. Applicants respectfully traverse for the following reasons.

Applicants submit that the Office has not made a proper restriction. Restriction is only proper if the claims of the restricted groups are either independent or distinct. There also must be a serious burden on the Examiner if restriction is required. The burden of proof is on the Office to provide reasons and/or examples to support any conclusion in support of restriction (see MPEP § 803). Applicants respectfully submit that the Office has not demonstrated that it would be a serious burden to examine the entire application.

Applicants make no statement regarding the patentable distinctness of the groups, but note that in regard to the restriction between Groups I -VI, the Examiner provided only a general assertion that a DNA and a protein are different compounds, each with its own chemical structure, function and utility. However, the Examiner did not provide any reasons or examples in terms of such structures, functions and utilities, for example, to support the restriction between all of the DNAs and proteins of these groups. Also, the Examiner provided only a general statement that the DNA sequences of Groups II, IV, and VI are patentably distinct as encoding enzymes with different structures, functions, substrate specificities and utilities. However, the Examiner did not provide any reasons or examples, in terms of such structures, functions, substrates and utilities, for example, to support this statement. In addition, the Examiner made a general statement that the proteins of Groups I, III and V are patentably distinct as having different structures, functions, substrate specificities and utilities, without providing reasons or examples, in terms of such structures, functions, substrates and utilities, for example, to support this statement. The Examiner also provided only a general statement that the DNA molecules of Groups II, IV, and VI are not limited to the production of polypeptides of Groups I, III and V, but can also be used as a hybridization probe. However, the Examiner did not provide any reasons or examples, in terms of such probes, for example, to support this statement. Also, the Examiner provide a general statement that the proteins of Groups I, III and V can be obtained by a materially

different method, such as by biochemical purification. However, the Examiner did not provide any reasons or examples, in terms of such purification methods, for example, to support this statement.

In regard to the restriction between Groups (I and VII), (III and VIII) and (V and IX), the Examiner provided only a general statement that the proteins of Groups I, III and V can be used for the production of antibodies against the protein. However, the Examiner did not provide any reasons or examples, in terms of the production of such antibodies, for example, to support this statement.

In regard to the restriction between Groups (II and X), (IV and XI) and (VI and XII), the Examiner provided only a general statement that the DNAs of Groups II, IV and VI can be used for the production of proteins of Groups I, III or V. However, the Examiner did not provide any reasons or examples, in terms of the production of such proteins, for example, to support this statement. In addition, the Examiner did not provide any reasons or examples showing that the production of the proteins and the production of the products of Groups X, XI and XII are materially different processes.

In regard to the restriction between Groups (VII - IX) and (X - XII), the Examiner provided only a general assertion that the methods of Groups VII-IX, which use proteins, are patentably distinct for employing products that are patentably distinct from the products (DNA) used in the methods of Groups X-XII, and vise versa. However, the Examiner did not provide any reasons or examples, in terms of a description of the respective methods, for example, to support an assertion that these methods are materially different.

Thus, the Examiner has not supported the restriction of Groups I through XII, and has not shown that it would be a serious burden to search and examine all the claims together. Applicants respectfully submit that a search of all the claims would not impose a serious burden on the Office. Applicants respectfully submit that nucleic acids, their encoded

proteins and associated substrates/products should not be restricted, since a search of one should include a search of the others. In addition, it appears that the Office has not supported a restriction of all of the group combinations. For example, the Office has not supported a restriction between Group I and Group VIII, and between Group I and Group X.

Applicants also respectfully submit that if the invention is so narrowed, as to restrict the claims into 12 Groups, and in which, an extensive restriction is made between nucleic acids, their encoded proteins and the associated methods of use, and in which, an extensive restriction is made between a class of nucleic acids and a class of proteins, etc., Applicants cannot adequately claim the invention, without filing numerous patent applications. This is an undue burden on the Applicants.

Applicants also submit that if the product claims are found allowable, the method claims should be rejoined under MPEP § 821.04, if the method claims depend on, or include all the limitations of, an allowed product claim.

Applicants also submit that it appears that the above restriction also represents an election of species in regard to the product and method claims. Therefore, Applicants respectfully submit that if a product or method claim is found allowable, the Office should expand its search to the respective, non-elected product and method claims.

Accordingly, for at least the reasons presented above, Applicants submit that the Office has failed to meet the burden necessary, in order to sustain the requirement for restriction in the present application. Applicants respectfully request the withdrawal of the Restriction Requirement.

Applicants respectfully submit that the present application is now in condition for examination on the merits, and request early notice of such action.

Respectfully submitted,

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